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The census of industrial employment, wages, and social condition, in Philadelphia, in 1870

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THE CENSUS

OF

INDUSTRIAL EMPLOYMENT, WAGES,

AND

SOCIAL CONDITION, IN PHILADELPHIA, IN 1870.

By LORIN BLODGET.

[Read before the Philadelphia Social Science Association, April 25, 1872.]

THE social condition of the classes employed in the various industries is the foremost question, almost, in all parts of Europe, and while feeling little direct pressure on this point in the United States generally, we have still had some striking and painful experiences; and we have a general, though vague, expectation that dangers of a serious character await us almost at any moment.

In Philadelphia, however, we have an exceptional condition on more than one point. Exceptional in regard to the extent to which purely productive industry has been developed, and again in the almost entire exemption so far enjoyed from the agitations and conflicts that have occurred elsewhere. We have had no strikes here, strangely enough; and in looking about for cases of antagonism between proprietors and workmen, we can scarcely find an instance. No matter how large or how small the establishment, and we have many of really enormous proportions, there is rarely or never an occasion for difference between employers and workmen. Some of the greater iron works almost approach the coöperative system in the harmony of masters with workmen, and in the frequent exchange of acts of kindness and substantial benefits. Fully a hundred well-known names can be cited, embracing all the larger establishments of the city, with the

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same grateful suggestion of generous enterprise on the part of the proprietors, and the same emulation in faithful labors on the part of workmen.

Indeed, I think the evidences strong, that a greater than temporary success has been gained, and something far beyond mere monetary triumphs have been secured. I believe that an era marked by far higher social attainment on the part of those who are employed in productive industries has begun ; that the people not only may be, but have already been, elevated to a position vastly beyond what they have heretofore occupied. I believe that he long existing, and apparently insuperable antagonisms of labor and capital have been shown to be founded in gross mistakes and erroneous systems. Why are we rewarding the prophets of evil with an hourly increasing measure of success, if there is not some landmark already passed in the road of enlightened and intelligent industry?

If we have, indeed, gained a point beyond which we may not again recede, and have established a condition of prosperity which other nations have not so much as believed possible, we shall justly mark the centennial of our history with a triumph scarcely less than that with which it begun. The liberty of labor, and the power to command with it all the social attainments of our advanced civilization, is quite as practical an achievement as that which gave us political liberty.

There has been possibly too much discussion of industrial questions from the mere point of profit as business ventures, and too ready a disposition to adopt or abandon any principle or practice the moment it was feared that for the time it would not pay. For this reason proprietors in times of temporary depression have been ready to stop work, to abandon the property and disperse the capital employed, when a few months of patience with adverse circumstances would have brought around a new period of demand, and would have saved for productive uses a vast amount of means that in the breaking up of large establishments is inevitably lost; and while we cannot deny the right of a proprietor to protect himself, we must regard these changes as great social misfortunes.

The highest point to which any condition of industrial development can attain is that which brings the productive workman and

the intelligent citizen nearly, if not absolutely, together—one that in all essentials makes them the same. To most nations this is scarcely less than a dream and a delusion ; a result frequently hoped for by enthusiasts, yet practically beyond the limits of possibility. Indeed, in most European countries, it is painful to observe that the line of separation constantly grows broader and more absolutely impassible ; the workman in productive labor sinking to a state of helplessness and degradation, and ceasing to be capable of the distinct and independent existence which constitutes a citizen.

But in the industrial development that distinguishes this city and its surroundings, there have always been features of peculiar interest, marking a large departure, originally, from the standard of other manufacturing districts. Starting with greater comparative intelligence, skill and persistence, our people have gone on to create a higher social and civil state, until now it may safely be said that no other community equals—certainly none excels—us in the measure of advancement we have attained above mere helpless, brute, factory labor. And we have really a phase of social science worked out to practical results ; one which we may take up and discuss in quite another tone from the usual strain that belongs to manufactures, as elsewhere understood.

I have, as before said, sometimes thought that those who advocate industrial development, or the policy which leads to it, permit the bald monetary question of profits or losses to become too prominent, and to obscure the greater question of social development. When a controversy is supposed to turn on a question whether a manufacturer shall make money, and that nominally at the expense of a trader or a consumer, it is not easy to bring out the proper relation the case has to society as a whole. Industrial development is in fact not a question of division in which one gets what another loses. There is no loss on the part of either trader or consumer, and the gain is shared by every member of society.

To repeat, on reference to aggregates, the simple facts for this last year, 1871, may be roundly stated to be that a city of 800,000 people produced four hundred millions of dollars' worth of actual fabrics, exclusive of all mere sales or exchanges; and that on this mass of fabrics produced, the net profit, in the sense of values realized above the cost for values paid out, was nearly one hun-

dred millions of dollars. This calculation goes a step beyond our exact municipal boundaries, however, just taking in such suburbs as are the city's own, and not including anything belonging properly to any State or county near us. And it also derived from a calculated increase of 20 per cent. in the calendar year, 1871, over the computed production of the census year ending with June, 1870. The footing for that year is, as carefully revised, $335,000,000, to which, by adding 20 per cent., we have $402,000,000.

From the most careful examination of the details during the year 1871, and down to the present time, I am clear that this estimate is law, and that for so much as has already elapsed of 1872, the advance over 1870 is more than 25 per cent.

The world, generally, has concerned itself with the profits of mere trade, far more than with the interests and profits of creative industry, and it is thought that wealth increases satisfactorily when a city is made a point though which exchanges pass. We have all this here : of buying and selling merely, and beyond the handling of our own manufactured products over to dealers, we probably conduct a trade of $500,000,000 yearly. There is a fair profit in it, but it is a profit that the consumer pays, and that comes from some other side ; it is taken from one party or person, in a certain sense, to benefit another party or person. Not so with the values produced here in manufactures. These pay a profit not drawn from the consumer ; it is a created profit, the creation of the active brain and the skillful hand. It is the direct wealth of powers which might, but for such opportunity, have been wholly wasted in idleness. For this reason it becomes conspicuous for the benefits it confers, and it makes itself seen and felt in a thousand forms that are not consumed with the day's demand.

I am not clear as to the most effective mode of bringing out the especial purpose of this review of the condition of our productive industry ; but I propose to cite enough of what I must call, by way of distinction, social facts and results, to maintain the preëminence of this point over the mere money made by the employer, or even by the workman. If we are really founding an era of better relations of labor to the results of labor, let us signalize it as effectively as possible. But if we are merely in the middle of a jolly season of good profits for the employer, and good wages for the workman, to be followed soon by strikes,

poverty, loss and degradation, we, or at least I can speak for myself, are in a state of singular delusion. For our people do not and will not believe that evil impends over them. They will not cut down their expenditures, nor circumscribe their living. For five or six years past they have at intervals been menaced by threats that they would speedily fall into ruin to balance their account of present prosperity, but they have so far been secure.

And is their social state secure, or reasonably secure? Is it one which may continue to exist, and ought to continue to exist?

Is it the natural fruit of good laws, of intelligence, industry, and steady occupation at the work we find to do?

I believe it is. I hold it clear that whatever threatens or wrecks our present prosperity is wrong and outrage. No matter whether from general laws or from social disorders, we ought not to have any worse state; and we ought, on the contrary, to go on to higher and higher social prosperity.

In proposing to present some of the more general results of the industrial census of Philadelphia recently completed, I should, perhaps, explain something in regard to the census machinery, or the conditions under which an account of the facts is taken. It was long since deemed important, next to the mere enumeration of the people, to inquire into their social condition, their occupations, and modes of living. At present there are several schedules, as they are called, other than those of mere enumeration of persons, the two more important of these being described as, No. 4, *The Products of Industry*, and No. 3, *The Products of Agriculture*. In 1860 these constituted so large a mass of returns, as to make a quarto volume each, and that of population being another, there were three volumes of statistical results. It is significant that these two alone, of business pursuits of the people, are raised by the fundamental law of the census into great social importance. There is no inquiry into ordinary mercantile pursuits, whether in buying and selling at home, or in importation from abroad. Our manufacturers have sometimes thought the government inquisitive beyond reason in requiring this return of manufactures, but there is in this very demand, an acknowledgment of the higher position of the pursuit itself. The inquiries are made because the facts are essential to the public welfare. What is produced, either from the

soil or from the hand of skilled labor, is in a great degree a creation, so much absolutely added to the national wealth.

Much difficulty has existed in obtaining correct and full returns of manufactures, because of the real or supposed trenching of the necessary inquiries on the seclusion of business which is often indispensable to success under the sharp competition of modern processes. The schedule inquires, first, into the capital invested, next, the kind of power employed, the number and power of steam-engines, and the number of distinct pieces of machinery. Next the number of persons employed, men women and youths; the aggregate of wages paid, the quantities and value of raw material used, and the quantities and value of manufactured products. All this, however, is applied only to establishments manufacturing more than $500 in value within the year. So that many thousands of dollar's worth of articles may be manufactured in families or elsewhere, where the value is less than $500, without being taken into the account.

All this work is done through the United States marshals, by special assistants temporarily employed for that purpose, and not by persons appointed by, and responsible to, the census office itself.

I will not stop to speak of the imperfections necessarily belonging to the present census system, since by special efforts they have been almost completely surmounted so far as this city is concerned. The whole system is absolutely inadequate to the importance of the desired result, and to the vast development of the last decade particularly. The country has grown, industrially, to much more than twice its magnitude ten years ago, and it has become almost impossible to show the full proportions of its importance through the inadequate machinery of the old census laws, simply because of this magnitude, and of the elements of competition and business energy infused into every branch of industry.

And as to forms themselves, and the precise inquiries to be made, there is something needed in the enlargement of what relates to the social state of those employed—more full details as to age and sex, and as to the wages paid for different grades of skill. The present schedule only divides the employed into three parts—first, *men;* next, *females;* and lastly, *children and youth*—being those of both sexes under fifteen or sixteen years. The wages are required only in the aggregate, including everything paid as wages

for the year. Further statistics are necessary to trace the family relations of the employed, among which should be the number of heads of families, the number of full workmen not heads of families, the number of those not skilled or full workmen, yet above the age of boys. And so of the females. At present most of this desired information can be obtained in but few cases, and must be inferred or estimated for the remainder.

I repeat, as an explanation of the difficulties and imperfections of the present census, that every department of active competing business, whether in manufacturing, or simply in selling, involves great labor and delicacy in the merest attempt at a census. It is business of the most driving and urgent sort to the proprietor, and he cannot afford to risk anything by throwing its reserve aside, and opening it to the exact knowledge of the curious or competing. While some needless solicitude exists on the part of proprietors, there is still the reserved right which no one can dispute; and care must, therefore, be taken in framing the inquiries of a census, so as not to ask too much, and by that means to merely get refusals or misleading statements. We have nothing to do with the profits of the proprietor, and, indeed, little concern with other matters than the facts that relate to the social condition of the employed, and the aggregate of values produced.

On this point it is doubtful whether the new census law, so much hoped for to take the census of 1870, but which finally failed of enactment, did not go as much beyond proper limit as the old or existing law falls short. We have yet to see exactly how the present law has been enforced, and whether it has not been evaded, simple and few as its inquiries were. Indeed, I am informed that in some cities the want of care in preserving the information given from what may be called individual publicity, reduced the return to little more than half the true account. This is the reason given, by proprietors at least, for deficient aggregates of the production they are really interested in making generally known in the aggregate. If one-half of the iron product of this city, or of Pittsburg, for instance, should fail to be included in the census return, a public injury would be the consequence; yet want of care in protecting individual statements might force proprietors to withhold, in simple self-defense, what is so valuable even to

themselves in the summaries which fix the character and credit of a manufacturing city.

In considering, as has been suggested, the proper duty of this city to make its exact position known on the occasion of the centennial celebration, this question becomes important. Shall a new census be taken; and if so, how shall it be done? I am not prepared to answer for myself, further than to say that no greater fullness of detail as to business matters is desirable than is now provided for in the United States census; but all facts relative to specific wages, age, social condition, etc., of persons employed, might be given much more fully and with great advantage to ourselves. There is nothing on these points that will not greatly credit and benefit us to make fully known. We have no poverty or suffering to disgrace us; no concealed enmities of employers and employed to endanger the security apparent on the surface. There are no crowded tenement houses to represent inability on the part of the employed to become citizens; none of the unsettled aggregations of mere laborers, who drift about as employment is attainable in one place and fails in another.

Though reluctant to attempt classifications on the imperfect details of the present census as to the social condition of persons employed, it may perhaps aid further inquiry to make some estimates based only on the best judgment I have been able to form after a year of observation. We may assume that our productive industry now employs 100,000 men and 40,000 females; these figures being but little in excess of the exact summaries for the census year (which are 92,112 men, 35,478 women, and 10,286 boys and girls). Of these perhaps one-fourth of the men are heads of families, and one-eighth are minors under 21 years. Of these minors, more than half do full work and draw full wages, leaving 5,000 or 6,000 to be properly described as boys, generally at half wages. The largest number is of unmarried, or non-householders, if married; and from 20 to 30 years of age. Heads of families may be said to average fully $3 per day in wages, or $18 per week; the next, or greater class, average $2.50 per day, or $15 per week, and the minors $2 per day.

In female labor the estimate is not so easy. The proportion of married women is not more than one-eighth; of the next class being grown girls or young women, or at least without families,

the proportion is largest, but there is little difference in wages. The younger class are more numerous than the males, there being, of young girls at half, or little more than half, wages, not less than 6,000 or 7,000.

And as to the family relations of all these, it is probable that few families are dependent on the wages of one person, on the man or on any other member, for subsistence. The average is at least two. And I think it may be assumed that every household of five persons has—as an average, of course—one of its members at $10 to $12 per week, and one at $15 to $18 per week, the total of resources being say $28 per week.

I refer to these estimates to show how definitely we may account for the prosperity of the employed classes, if we could obtain a census of exact details.

Again, it should be said, that all this is confined to manufacturing industry alone; all other employments being out of the scope of the present inquiry. A rough estimate would give numbers *employed at wages in all other pursuits* at about three-fourths of the numbers employed in manufacturing industry, and their social condition, on an average, nearly the same.

I am in doubt whether in proceeding to illustrate the results of our census it would be acceptable to you to go into full statistical details, and to recite the lists of classes with the aggregates of capital, machinery, persons employed, wages and results in manufactured values for each. For myself, I am fatigued with the mere figures, and would prefer only to show you how formidable they are; summing up at the end of this paper two or three condensed tabular statements of wages paid in the several employments and to the several classes, of age, sex and skill, so far as I have been able to separate them.

And for the totals of production, after citing a few from the preliminary publication before us, I will refer you to a condensed table here attached, and to the full census when corrected and issued.

It has been suggested that some comparison of the manufacturing production to the import trade be made here, and while I do not undervalue importation by any means, it is proper that the relative magnitude of the two interests should appear. For the fiscal year ending June 30, 1870, which is identical with the cen-

sus year, the imports of Philadelphia from foreign countries were $14,500,797, at gold value, to which add one-eighth, would make $16,313,397 in currency value. Our manufactures for the same year reached $334,852,458 in value, or *twenty and one-half times the amount of imports*. Clearly, on the score of magnitude alone, we must accredit our manufacturers with a respectable position in the business interests of the city.

One of the most important of the points I wish to bring to your attention is the very great diversity of industries, and the completeness of the representation of the wants of a highly organized social state, and a rich and prosperous people. The power to consume and the power to produce, are alike and equally striking. In fact, they always go together, and here is to be found the key to much error of national policy, particularly in European States, where the amount, or proportion of wages paid to productive labor, is thought to be the least of national concerns, so that the laborer is not a pauper.

No adequate discussion of the true relation of wages to national prosperity has yet appeared, but I venture to assume that no other single fact has such permanent and overruling importance; nothing is so vital to the prosperity and endurance of a highly advanced nation, as that the productive industry of its people shall be fully employed, and at the same time liberally paid. To be fully employed, for the time, at wages merely sufficient to maintain existence on the part of the employed classes, is to place its interests on the very border of a gulf of disorder and of suffering. Strikes, famines, spasms of great production, alternating with intervals of no production at all, with many other evils, are but the ordinary and constant attendants on a state in which labor is paid the smallest pittance of wages.

Of course such labor cannot of itself consume anything of consequence. Markets are therefore to be sought and found outside of its circle, and away from the nation itself, probably. Diversity is not to be developed except by accident, and the nation or people who so occupy themselves, that is, in manufacturing for foreign countries, are not represented in their products, as we may say. What they do bears little direct relation to what they are, or to what they require.

The point I wish to make here is that in what we do, and in

what our productive industry is, our people are fully represented; the products all belong to what we are, and to what we require. To illustrate: the silk weavers of Lyons and St. Etienne produce rich fabrics, which very few even of their wealthier classes consume as we consume, and the laborers do not consume at all. The laces, the porcelains, the bronzes, the thousand rich and decorated fabrics of France, Belgium and Central Europe generally, go almost wholly abroad or out of the country of production to be consumed. We revel in elegant fabrics of both European and American manufacture, and, as years pass, the central point of skill and taste in many of these fabrics is transferred to our own city, and brought within the immediate reach of those who consume and require them. Of the crude materials for these finer fabrics we are large consumers: raw silk, cashmere, mohair, alpaca, and other luster wools for worsteds; sable, ermine and other furs; Persian lambskins, East Indian pearl shells in large quantities; the bases of all known perfumes; all the fine cabinet woods; immense quantities of fine marbles; minerals for porcelain, with more of gold and silver than any other city of the world consumes in manufactures. In these and many other rich natural products, there is no local market greater than that furnished in this city. And for the reserve of coin which is popularly supposed to lie waiting a return to specie payments, we shall be compelled to look to the melting pots of our artisans; it has been industriously picked up to make watch cases, gold leaf and silver-wares for ten years past, until there is scarcely a dollar of coin outside the United States treasury and a small stock held by the banks.

We are, therefore, not great in iron, coal and petroleum alone; nor in the useful arts as distinguished from those of skill and elegance. We are, as I believe, symmetrically developed, and are prosperous and fortunate in all the relations of employed labor to society because of this symmetry.

It has been my duty and my choice to give a very large share of attention for fully fifteen years past to the actual state of productive industry in Philadelphia. I made a very thorough examination of it in 1857, and again an exact and careful one in the census of 1860–1861. And finally, in the census of 1870–1871, I have devoted more labor than I can well explain to the verification of the statistical details of the recent census. These statis-

tical details should, as I have said, be accompanied by all attainable facts bearing on the social state of those employed; particularly the wages paid, the manner of living, and the measure of education and intelligence that prevails. Nothing less than personal observation can show all these conditions fairly, and no mere statistical aggregates can tell the whole story of social growth.

First, however, to use the simple aggregates of numbers for some part of the illustration, and taking the department of productive industry alone, we find that there are 9,000 employers, or proprietors, and very nearly 140,000 persons employed at wages. The year's wages exceeds $62,000,000, which is, excluding the holiday season, about one and one-quarter millions per week. This account of wages is surprising beyond that of the numbers employed, and in comparison with a total of $27,000,000, only, paid as wages in 1860, it marks a great advance. The increase of numbers employed is but one-third, while the wages paid are more than double. In this account of persons employed and wages paid there are some qualifications that should be explained: First, that the account embraces shifting items of detail, in the coming in and going out of individuals, the extinction and renewal of firms, and the want of absolute completeness in the canvass itself. In many cases the persons engaged, both as proprietors and workmen, in a manufacture are all enumerated, although the proprietors of course receive no wages. The result in my judgment is, that the numbers employed are more fairly reported than is the aggregate of wages paid—which is never more than full for any one establishment and is often short returned, or wholly absent—and I would add two or three millions for such omission to represent the actual receipts of wages in all the departments of manufacturing industry. In 1860 an entirely full return would have been about $28,000,000, and in 1870, about $65,000,000.

Comparing these amounts of wages with the aggregates of manufactured values, we find them each about twenty per cent. of the production, which is a fair proportion, and justifies the amending of the wages return for 1870, as proposed. A low grade of manufacture, or one where little steam-power is employed, calls for 35 to 40 per cent. of the product to be paid in wages, while a very valuable material and a high steam-power used in manipula-

tion, may reduce the proportion of wages to 15 or even to 12½ per cent.

The more striking features of diversified skill with liberal compensation are presented in the employment of females, and here even more decisively than elsewhere is the occupation associated with the best evidences of advancement above the grade of factory labor. Even in the great establishments devoted to textile fabrics, cotton, woolen and silk goods, the standard of personal character is high, and is rapidly advancing in many departments, and in none retrograding. The arts of design, and the invention and construction of patterns for prints, for jacquard loom-weaving in shawls, carpets, fancy woolens, braids, ribbons, embroideries, etc., are sedulously cultivated in a hundred establishments; and are already developed to a degree far beyond the public belief.

In one conspicuous establishment the engraving of printing rollers is conducted by highly skilled and amply paid female hands. In several establishments of this class, that is, print works and weaving factories, designs for printing and weaving are originated, and the products of their skill are far less frequently seen by our own citizens than by the people of other cities and even of distant States; it being a peculiar feature of our industry that the most extensive lines of these goods are sent to New York for distribution, and are consumed by the inhabitants of other and chiefly of the Western States.

Again, in the fine and decorative arts; in painting, engraving and photographic work; in chromos and color painting; in drawing and paper decoration, there are high grades of skill developed. The arts of embellishment are most successfully practiced on thousands of articles, even on those usually described as articles of use rather than of ornament—lamp-shades, fire-screens, printed cards, and a thousand that might be enumerated. For nine-tenths of all that beautifies and interests us in this useful class, as well as in finer and more artistic fabrics, we are to credit our own people, and not foreign countries, or distant cities in our own country. And in all this, female labor finds fair wages and pleasant surroundings. Bank-note and stamp printing belong in the same category, and this may be cited as an instance in which private business establishments pay very nearly the highest wages which are paid in the United States treasury or the United States

mint. It is skill, trustworthiness and intelligence that command this remuneration; such skill as belongs directly to productive industry also, and constitutes a part of that general elevation of the standard we are considering.

The vast extension of the manufacture of light articles of hand-woven and knitted fabrics of wool, worsted, cotton and silks, affords one of the largest single department of attractive employment to females. Including silk trimmings, fringes, etc., the census shows that 4,000 females are directly employed at productive labor alone, exclusive of those who sell these articles in stores. Nearly nine hundred of these are employed on silk, or silk-mixed goods, including upholsterer's cords and fringes. Many of these being young, the average of wages is not high; it ranges from $4 to $20 per week, the average, including a large number of young persons, being about $7, or $350 per year; and the total sum paid as wages approximating $1,400,000 per year. Adults here earn an average of $10 to $12 per week, or $500 per year. In view of the light and pleasant character of the work, its cleanliness, and tastefulness, inducing habits of person and of character corresponding in these respects, it is one of the most gratifying evidences of the social advancement belonging to our well-rewarded industries.

Next to this, perhaps, the lighter departments of clothing deserve notice: collars, cloaks, millinery, dresses, shirts, etc. The number of females employed here is not less than 3,800, and their wages are higher, as well as the standard of skill superior. They receive an average of $9 per week, or $450 per year, and earn an aggregate of $1,700,000 in the year. A very large number not wholly occupied with manufacturing, but selling also, as hundreds are who are engaged in millinery, dressmaking, and clothing establishments, have not been recorded in the census, and are not here included. They earn as much, though not always in the form of wages received; and, as a class, they are pleasantly situated and well remunerated. The very general practice of uniting in one establishment the manufacture and the sale of light articles of this class, increases the number of small proprietors, and greatly benefits all.

In heavy clothing, woman's work is more rough and severe. The number returned as in this employment is very large, 5,954;

but the account of wages is not so easy to obtain, all being done as piece work, and the great majority working at their own homes for proprietors who give out the work. Not being constant or continuous, this labor is probably paid not more than $6 per week; it fills up the unemployed time of a woman who has household duties on her hands also, and it is an adjunct of the means of living of a family, rather than the principal means. But we see that fully $1,750,000 per year is added to the earnings of females from this source.

In boot and shoe making a peculiarly favorable condition now exists for female employment; and the numbers so engaged are about 2,500. The finer kinds of shoes and boots for children and ladies are most extensively made here, a single establishment often employing 250 to 300 females, with as many males. The work is greatly changed for the better, as regards taste and even elegance, and the hundreds of girls and young women leaving one of these establishments at six o'clock would, from their dress and demeanor, be supposed to come from a school or lecture room, rather than a factory. I have seen with peculiar pleasure these incidental evidences of their pleasant and improved condition on many occasions, and have shown them with pride to strangers accustomed to the low standard of personal appearance and character belonging to European establishments of a like grade. The average wages are here $7 per week for females; $350 each per year, and $875,000 in the aggregate.

The umbrella and parasol manufacture has not been included in the previous statements. It employs over 1,000 females, and pays nearly $8 per week, or $400,000 in the aggregate. The standard of taste and skill is here generally high.

In factory work more distinctively, or in mills with power-looms, on cotton and woolen goods, the number of females employed is very large; about 8,000 being directly employed in such factory work, and not included in the preceding summaries. But even this grade is far in advance of the condition it presented in 1860. Power-loom weaving, spinning, winding, etc., are of course not so cleanly employments as those above named, but the opprobrious title of "factory girls," formerly much employed, and really descriptive of a less self respecting class, is now rarely heard, and still less rarely deserved. The wages paid are fair,

and even higher than in other classes, they range from $7 to $14 per week, and average fully $9 for the year and $10 for the time employed. A large share being piece work, and one person attending two looms, the work drives a good deal, and much is earned when at work. At $475 per year the 8,000 employed, earn $3,800,000 in the aggregate; a large sum, but only a small share of the total value of textile fabrics of every class made in the city, which reached the enormous sum of $58,500,000 for the census year.

I might go on at great length in citing details of large employment and liberal compensation for productive labor of this class, and there is nothing more satisfactory to present as evidence of the high degree of development which our industry has attained. The introduction of steam machinery, and of various superior processes of manufacture, greatly favors the employment of intelligence, as contrasted with mere brute strength. Take the commonest factory labor, and one young woman now attends two power-looms, weaving 10,000 yards each of dress goods per year; where formerly one person of greater physical strength, attended one hand-loom, weaving not more than half as much each per year, or one-fourth as much in all. Generally the improvements of the past fifteen years have fully doubled the productive power of every person employed, and what is better, have enlarged the basis of employment so that twice as many can be effectively employed.

The proportion of young persons now employed, and the wages paid them, form the least satisfactory part of our statistical returns under the census. It was required, by the terms of the law, that all under 16 as males, and under 15 as females, should be entered as a separate class; described on the forms as "children and youth." This was, however, very imperfectly complied with, and no distinction of sexes was made of those so entered. I have thought it safe to assume that the number of boys and girls was nearly equal, and that the footing I make of the totals at 10,286 is approximately correct. There are 5,000 of each, in round numbers, therefore, who are minors in fact, or less than adults in skill as well as in years, and receiving less wages. Indeed, there are some two or three thousand more who are partially employed, as it may be said, and are earning little or even

nothing at regular wages, because they are learners. Generally, however, quite young boys or girls get $2 to $3 per week, if living at their own homes; and for all these minors an average of $3.50 per week would be nearly correct. For a year, with its frequent interruptions, the total earnings must be put at less than $3.50 for the whole number of weeks, yet at $3 average, for fifty weeks, and 10,000 employed, the total compensation paid is $1,500,000.

Much has been recently said and written in regard to the premature employment of children and youth in manufacturing establishments. It is certain that legislative restriction has been necessary in England, and in Massachusetts, Rhode Island, and perhaps other States. But so far as my personal observation goes, no such necessity exists in Philadelphia. It is rare that grinding poverty compels premature employment, and when employed, these half-grown persons or children are at light work, and with interruptions for some months of every year. I have seen few cases in which want of education or personal degradation became apparent, and many instances exist in which our conspicuously honorable proprietors of extensive works take especial pains to favor education, and all proper relaxation on the part of those employed by them. The names of Bullock, Dobson, D. S. Brown, Campbell, and many others in textile fabrics, ought not to be passed without mention; and it only needs the experience of a visit to the hundred magnificent mills in and near the city, to assure any citizen that we are already far above the low level to which the employed children and females of other countries have fallen. This result is chiefly due to the high and resolute character of the proprietors, who prefer to fight their way to success with the aid of their workpeople, and not in antagonism and hostility to them.

And finally, as to the heavy work of manufacturers, the work and wages of men only, the same general amelioration exists. As I have said, there is nothing heard of strikes, or of hostility between proprietors and workmen. There are 92,112 adults, or full men, in the lists of persons employed at wages in manufacturing pursuits in this one city; a productive force really enormous, working as it is with over 2,000 steam-engines, of the aggregate power of 50,000 horses. Almost unconsciously to most of our

citizens, this vast machinery does its daily work, making fabrics of iron, wood and textile fibers largely exceeding one million of dollars in value for every working day in the year. If these ninety thousand men, officered by their ten thousand proprietors, were to defile through our streets in military order, they might convey some adequate impression as to the power we so little regard, and if their daily work, or one day's work of them all were set out in due order as one of the parts in the centennial exhibition, it would be admitted that this city had the right to leadership in that great event.

As to the wages paid adult men in the year of the census, it was not practicable to separate either the details or the aggregate from the general account of wages. Formerly men were paid twice as much as women; now the proportion is as three to two, probably. Wages fell somewhat heavily in 1868 and 1869, from the high figures of the war, but since 1869 they have advanced rather than receded further. Many classes are paid $21 per week or $3.50 per day; many other classes more than this, and skilled persons at piece work earn even $5 and $6 per day. Mere laborers of course decline to $12, $10, and $9 per week, which last is the lowest rate paid to any laborers assuming to do a man's work. All skilled labor is really high, showing that the door is open to a scale of wages affording abundant means of living, to all who have the capacity to work with skill at all.

And as to the mode of living, it is generally true that skilled workmen live in their own houses, or, at least, in single houses; that they maintain their families with ease, and that education, with all the accompaniments of personal comfort, are secured to their children. There is little or no living in rooms, or in tenement houses, except on the part of some wholly unskilled laborers. This city is conspicuous for its great number of dwellings of abundant neatness and comfort, owned and occupied by single families whose whole maintenance is from manufacturing industry. And these houses, if rented, pay $15 to $25 per month, and, if owned by the occupant, taxes, interest and other expenses represent a close approach to the same annual expenditure. That all this, with the current cost of living and the frequent expenditures for other than mere necessaries, is easily borne by our mechanic and workman,

is sufficient proof that his resources from wages are comparatively ample.

I should be glad to be able to make a more exact analysis and illustration of the specific products of industry here than I find I have time or space to do now. The lead is taken in textile fabrics: cotton, woolen and silk goods, which we produce to the enormous aggregate of $58,500,000. Next are iron and steel manufactures, $40,800,000 in value, exclusive of a great variety and large aggregate of other metals, and of manufactures of iron with wood, as wagons, carriages, implements, etc., usually classed as half iron.

The literary industry of the city, in books, newspapers, etc., is $12,710,000 in monetary value; while books alone are $4,500,000.

On every side, in fact, we are met by footings of value so large that they startle us in comparison with the bald and meager returns of industry elsewhere. The clothing manufacture is $16,210,000 in value; that of boots and shoes, $10,700,000. Perhaps this last named has more rapidly advanced within the last decade than is generally supposed. The McKay sewing machine, by which soles are sewed on in an instant, and far more securely than by hand, has greatly improved the manufacture of shoes and boots for the trade. And not only are both boots and shoes far better and more durable now than in 1860, but their price is even less. Skill, capital and improved machinery have won especial triumphs in this department, not less than in so many others.

I hesitate how definitely to refer to the many triumphs of our manufacturers in special products, in fear that I may trespass on some of the proper rights of reserve belonging to industries often contested between us and Europe; but I may say generally that at least fifteen or twenty leading articles, in which the values made here now exceed half a million dollars each, yearly, have been won in the last ten years absolutely as against foreign competition, and that the markets of New York, as of all other cities of this country, take now no other than our own supply, sent from Philadelphia manufacturers. In woolens and worsted goods this is most conspicuously true; but in iron, steel, machinery and other products of the most diverse character there are frequent instances. The establishment of a new industry in this manner, to take the place of important articles previously wholly imported, is a feat of

generalship, courage and perseverance, worthy to crown its author with knighthood. I know several such in which, singly, the saving to the country counts millions already; and this saving is not only on the aggregate sum previously sent abroad, but on the price in detail to the consumer. In almost every case the present price is far less, and in several known to me it is only about half that which the article bore when wholly imported.

This important fact is too little observed by the public generally. Every established industry has saved us largely in present prices, exclusive of its thousand other benefits; and every new one founded and made successful, cheapens to the consumer the article it produces. With the principles concerned I do not propose now to deal, but the facts I am bound in duty to state as I find them and refrain from using the illustrations I find to my hand only; for the reason that a census to be faithful must be confidential, and the confidences of a proprietor I cannot violate.

It is often supposed that the industrial production of the country is a passive, and to a great degree a helpless interest, without the intrinsic vigor and enterprise which belongs to commercial pursuits. There can be no greater error, at least so far as the new or modern era is represented in our own city. No ventures in foreign trade can exceed the courage, foresight and energy requisite in founding new industries. I had very recently from the lips of one of the most successful of these, who now produces half a million of dollars in value yearly of goods which previous to 1865 were wholly produced aboad, some explanation of the specific risks and losses necessarily incurred in transferring the seat of a great manufacture from Belgium to Philadelphia. Business prosecuted persistently for many months at a foreseen loss of thirty or forty thousand dollars, and investment to the extent of twice this sum in machinery, the cost of which would be wholly lost unless the victory is won, are but illustrations of the risks, and representative instances of enterprise.

For myself I have a degree of respect, and even admiration, for these generals of the army of wealth producers, which I hope may become universal with thoughtful citizens. The bravest and the coolest of those who risk personal ease and accummulated wealth for the attainment of new and greater public benefits, cannot go beyond these men in achievements. Let one not acquainted with those

greater facts enter an iron-mill where the power of eight hundred horses and twelve hundred men is directed to the production of a single description of wrought-iron work exceeding three millions of dollars in value in a year; or, again, where eighteen hundred men and five hundred horse-power, finish a powerful railway locomotive every working-day of the year. In still another giant establishment nearly eight hundred power-looms, with nine hundred attendants, manufacture worsted goods at the rate of ten millions of yards per year; the aggregate value counting as many millions, nearly, as of the iron works first cited. More than twenty establishments exceeding one million of dollars in annual production exist within the city, and at least ten exceed two and a half millions each; the highest closely approaching five millions. At one ship-yard four gigantic iron steamships are now rising simultaneously on the stocks, a product new since the census of 1870, and not included in its figures or in the aggregates I have cited.

In short, if any citizen will make these great facts personally known, he will feel that a power far beyond his previous conception is working around us, not quite silently to him nor yet obtrusively; a power great enough to bear us on in a steady course of prosperity, I trust, at least until the rounded centennial period shall give us opportunity to make its greatness and its national beneficence widely known.

I have purposely refrained as I nave before said from burdening you with detailed statistics in this paper. By the great liberality of the census office and its enlightened superintendent, Gen. F. A. Walker, we have been enabled first to perfect the official record itself, and to gather and authenticate all the facts. Now we are also generally permitted to make them public without other reserve than belongs to the proper security of individual establishments; and under this permission a careful and complete tabular statement is nearly ready and will soon be distributed.

In addition to what belongs simply to the forms of return, and the facts there tabulated, I propose to make the most complete statement possible of wages in detail, of the ages and classification of persons employed at wages; the proportion of heads of families, of children, of females, and of other distinctions not

embraced in the official forms. The previous occupation and nationality of the several classes of persons employed; the derivation of industries themselves, and other incidents valuable, if not essential, to a comprehensive judgment of the whole case. The statement of wages paid in a large number of employments I have added as an appendix to this paper.

I may say here, however, that a peculiar assimilation, if not identity, is rapidly being established in the direction, and in the manner of prosecuting the labors of all these works. They are already Americanized, and essentially distinct from and beyond European establishments in all the characteristics of better paid more intelligent and effective labor, and greater results in productive power. One of our great proprietors spent a few months in England recently, visiting the districts and establishments making his own class of goods; and everywhere found defective machinery, unintelligent workmen, and want of improvement very striking in comparison with his own. This contrast in progress is due to the fact that neither man nor master here stops to embarrass the other by needless contests, and neither rests for a moment in a routine of work that he may by any ingenuity or any expenditure improve. The whole body of productive establishments is full of life and progress; new and magnificent structures are daily rising to be filled with new machinery and better forms of labor. A visit to some of these districts would astonish the quiet citizen who sees Chestnut street and Walnut street to the exclusion of the distant sections; the south and south-west, the north, north-east, and north-west are all and alike swelling with a strong and rapid growth of industrial establishments; and these not the traditional factories or mills surrounded with poor tenements, and houses built for employees; but fine structures in external as well as internal management; exponents of wealth as well as enterprise, and surrounded by new, cleanly, and spacious streets and squares, fit for the residence of as many proprietors as there are workmen. The Nineteenth ward is, perhaps, the best representative of this present growth, and I beg to suggest, instead of the hackneyed trip to Europe in which well-to-do citizens indulge, an inexpensive journey three to four miles northward and north-eastward, to a district where the city may be seen to grow.

Again I refer in conclusion to what I have suggested and believed is

the new era of the relations of employed labor to society in general. I claim that this personal antagonism, as the world generally has it, is a fiction or a misfortune, not a necessity. Diversity, skill, intelligence, demand and compensation go together, or should go together. There ought not to be an hour's difference between employer and employed; but if the dead-level of starvation prices is the basis, there can be no rest; if there is no skill and no intelligence developed to be observed and rewarded and to stimulate the workman, there is also no rest or peace. If foreign markets, and contingencies of demand wholly beyond the reach of the proprietor are relied on, there is again great danger; and if, with other things better, with skill, intelligence and demand for products, which are after all not rewarded by such compensation as elevates the workman to the dignity of a citizen, we may be sure that antagonism and silent or open warfare will frequently recur.

Here, however, the greater of all these dangers do not exist. The market is near at hand; prices of products are good; all forms of labor and of direction are well compensated: there is the widest possible diversity of industries, and the keenest intelligence ever ready to make more and better articles, both on the part of workmen and proprietors. However unfortunate or unsuccessful any temporary effort may be, there is no lack of hope or courage; no dead-level of helplessness.

To my view this concurrence of great facts and great benefits should be the profoundest subject of interest to all deserving the name of statesmen and philanthropists. If we can preserve these triumphs of industry, and strengthen and extend them until the century of our national existence is complete, we should then celebrate them with an emphasis and solemnity scarcely less than that which marks our earlier achievement in political liberty.

WAGES PAID IN VARIOUS INDUSTRIES IN PHILADELPHIA IN 1870.

The following statement of wages paid in various manufacturing and industrial employments in Philadelphia, has been carefully revised from information obtained personally in the revision of the manufacturing statistics of the United States census of 1870, and during the entire time elapsing since the census was taken.

During 1871 there was very little change, but in 1870 there was

a decline of perhaps ten per cent. from 1869, and nearly 20 per cent. from 1867. It may be said that the greatest decline in any class of employments, from the high wages of 1866 and 1867, was not more than twenty per cent., and the average not more than fifteen per cent., the lowest point being reached in 1870, and the tendency in the last months of 1871 and first months of 1872 being to an advance.

In steam-mills of every class, and particularly on cotton and woolen goods, wages have been quite regular, not rising so high in 1866 and 1867, nor falling afterward in 1870. Piece work wages which largely exist in the higher departments, and with the skilled workmen, scarcely changed at all. As a rule piece work pays well, reaching, as actually realized, one-third to one-half more than daily or weekly wages.

The general defect of the account of wages is the considerable proportion of unemployed time, and the defect of yearly aggregates, as compared with weekly or daily proportions. A man earning $20 per week, for instance, should earn $1,000 per year, yet the books of employing establishments will show but $800 to $900 actually paid the man; the difference representing unemployed time, and this usually due to the ease and choice of the workman, rather than to want of work, or stoppage of the mill. The summary of wages paid therefore falls below the weekly or daily detail of payments.

WAGES PAID IN MANUFACTORIES IN PHILADELPHIA, 1870, 1871—MEN.

	PER DAY.		PER WEEK	
Accountants	2 00 to 3 50		12 00 to	20 00
Agricultural Implements	2 00 to 2 50		12 00 to	15 00
Artificial Teeth	1 75 to 3 00		10 00 to	18 00
Bakers—Bread and Cake	2 00 to 3 50		12 00 to	21 00
Basket Makers	1 25 to 2 00		7 00 to	12 00
Brick Makers (boys and men)	75 to 3 50		5 00 to	21 00
Brick Layers—front	3 50 to 4 00		21 00 to	24 00
" " back	2 00 to 3 00		12 00 to	18 00
Boiler Makers	2 00 to 2 50		12 00 to	15 00
Book Binders	2 50 to 3 00		15 00 to	18 00
Box Makers	2 00 to 3 00		12 00 to	15 00
Boot Makers, by piece; Cutters	3 00 to 3 50		18 00 to	21 00
" Crimpers and Finishers	2 50 to 3 50		15 00 to	21 00
Brewers, beer and ale	1 50 to 3 50		9 00 to	21 00
Blacking	1 50 to 2 50		9 00 to	15 00
Blacksmiths and Wagon Makers	2 00 to 3 00		12 00 to	18 00
" Helpers	1 50 to 2 00		9 00 to	12 00
Bolts and Nuts	1 00 to 2 00		6 00 to	12 00

	PER DAY.			PER WEEK.		
Boots and Shoes—ladies and children	2 00	to	3 00	12 00	to	18 00
Brush Makers	1 25	to	3 00	7 00	to	18 00
Button Makers	1 25	to	2 50	7 00	to	15 00
Cabinet Ware and Furniture	1 50	to	4 00	9 00	to	24 00
Candles and Soap	1 50	to	2 50	9 00	to	15 00
Car Builders	2 00	to	3 00	12 00	to	18 00
Carpenters and Builders	2 00	to	3 00	12 00	to	18 00
" Assistants	1 50	to	2 00	9 00	to	12 00
" Ship and Navy	2 50	to	3 00	15 00	to	18 00
Carriage Builders and Trimmers	2 00	to	3 50	12 00	to	21 00
Carvers—wood	2 00	to	3 50	12 00	to	21 00
Chemical Works	1 75	to	3 50	10 00	to	21 00
Clothing Cutters	3 00	to	4 00	18 00	to	24 00
Clothing, Fitters and Sewers	2 00	to	3 50	12 00	to	21 00
Confectioners	1 50	to	2 50	9 00	to	15 00
Coopers	2 00	to	3 00	12 00	to	18 00
Cotton Mills, Spinners, Weavers, etc	1 75	to	3 50	10 00	to	21 00
Curriers and Dressers	2 00	to	3 00	12 00	to	18 00
Cordage Works	1 25	to	3 00	7 00	to	18 00
Cotton Mills, (skilled)	$2 50	to	4 00	$15 00	to	24 00
" younger or less skilled	1 75	to	2 25	10 00	to	14 00
Curriers of Skins	2 00	to	3 00	12 00	to	18 00
Cutlers, Clothing, or Boots and Shoes.	3 00	to	4 00	18 00	to	24 00
Cutlers, or Cutlery manufacturers	2 00	to	3 00	12 00	to	18 00
Dental Workmen, on Teeth or Inst's	2 00	to	3 50	12 00	to	21 00
Drivers of Engines, etc	2 25	to	4 00	13 00	to	24 00
Drivers, ordinary	1 50	to	2 25	9 00	to	13 00
Dyers	2 00	to	4 00	12 00	to	24 00
Engineers, proper in factories	3 00	to	4 00	18 00	to	24 00
Engravers, Wood, Steel and other	2 50	to	4 00	15 00	to	24 00
Firemen	1 50	to	2 50	9 00	to	15 00
Foundery-men, Moulders	2 50	to	4 00	15 00	to	24 00
" Laborers	1 50	to	2 50	9 00	to	15 00
Gas and Steam Fixtures	2 50	to	3 50	15 00	to	21 00
Glass Blowers	3 00	to	4 00	18 00	to	25 00
Glassmakers, other	1 50	to	2 50	9 00	to	15 00
Glass Cutters	2 50	to	3 00	15 00	to	18 00
Gluemakers, (skilled)	2 50	to	3 50	15 00	to	21 00
Glue Factory, Workmen, other	1 50	to	2 25	9 00	to	14 00
Gold Beaters	2 25	to	3 50	14 00	to	21 00
Goldsmiths	3 00	to	4 00	18 00	to	24 00
Granite Cutters	2 50	to	3 00	15 00	to	18 00
Grinders and Polishers	1 50	to	2 50	9 00	to	15 00
Hair Cloth and Hair Workers	2 00	to	3 00	12 00	to	18 00
Harnessmakers	2 50	to	3 50	15 00	to	21 00
Hatmakers, (felt and silk)	2 50	to	4 50	15 00	to	26 00
Horse Shoers	2 00	to	3 00	12 00	to	18 00
Hosiery Mill Works	2 25	to	3 50	14 00	to	21 00
Iron Work, Puddlers	4 00	to	4 50	24 00	to	27 00
" Helpers,	2 00	to	2 25	12 00	to	14 00
Iron Rollers	3 00	to	4 00	18 00	to	24 00
" Helpers	2 00	to	2 50	12 00	to	15 00
" Nailers	2 50	to	3 00	15 00	to	18 00
" Boilermakers	2 50	to	3 50	15 00	to	21 00
" Moulders Foundery	2 50	to	4 00	15 00	to	24 00

	PER DAY.				PER WEEK.			
Iron Foundery Laborers	1	50	to	2 25	9	00	to	14 00
Ivory and Bone Turners	2	00	to	3 00	12	00	to	15 00
Jewelers	2	50	to	4 co	15	00	to	24 00
Jewelers' Assistants	1	50	to	2 25	9	00	to	14 00
Laborers, general	1	50	to	2 50	9	00	to	15 00
Lathers	2	00	to	2 50	12	00	to	15 00
Leather Dressers	3	50	to	5 00	20	00	to	30 00
Locksmiths	2	25	to	3 25	13	00	to	20 00
Loom Bosses	3	00	to	4 00	18	00	to	24 00
Lead Works	2	00	to	3 50	12	00	to	21 00
Machinists, general	3	00	to	3 50	18	00	to	21 00
Marble Cutters	2	00	to	3 50	12	00	to	21 00
Marble Polishers	2	00	to	3 50	12	00	to	21 00
Masons, stone	3	00	to	3 50	18	00	to	21 00
Moulders, brick, (piece)	3	50	to	4 00	21	00	to	24 00
Morocco Dressers and Finishers	3	50	to	6 00	21	00	to	36 00
Morocco Factories, assistants	2	50	to	3 00	15	co	to	18 00
Music Engravers	3	00	to	4 00	18	00	to	24 00
Oil Cloth Makers	2	00	to	4 00	12	00	to	24 00
Oil Grinders and Pressers	2	50	to	4 00	15	00	to	24 00
Oil Refiners	2	25	to	3 50	14	00	to	20 00
Painters, House, etc	2	25	to	4 50	14	00	to	27 00
Painters, assistant	1	50	to	2 50	9	00	to	15 00
Paintmakers	2	00	to	3 00	12	00	to	18 00
Paper Mills	1	50	to	3 50	9	00	to	21 00
Paper Hangers	2	00	to	3 50	12	00	to	21 00
Pianomakers	3	00	to	4 00	18	00	to	24 00
Planing Mills	2	00	to	3 00	12	00	to	18 00
Plasterers	2	50	to	3 50	15	00	to	21 co
Plumbers	3	00	to	3 50	18	00	to	22 00
Printers, piece	3	00	to	5 00	18	00	to	30 00
Printers, Press and Assistant	2	50	to	4 00	15	00	to	24 00
Roofers, piece	3	00	to	3 50	18	00	to	21 00
Roofers Assistant	2	00	to	2 50	12	00	to	15 00
Rope Works	2	25	to	4 00	14	00	to	24 00
Saddlers	2	50	to	3 00	15	00	to	18 00
Sash and Doormakers	2	50	to	3 50	15	00	to	21 co
Ship-smiths	2	50	to	3 00	15	00	to	18 00
Stair Builders	3	00	to		18	00	to	
Shoemakers, piece	3	00	to	4 50	18	00	to	27 00
Shoemakers, assistant	2	00	to	2 50	12	00	to	15 00
Silversmiths	3	00	to	4 50	18	00	to	27 00
Silver Platers	2	00	to	3 00	12	00	to	18 00
Soap-makers	2	00	to	3 00	12	00	to	16 00
Spike-makers	2	50	to	3 00	15	00	to	18 00
Stone Cutters	2	50	to	3 50	15	00	to	21 00
Upholsterers	2	00	to	3 50	12	00	to	24 00
Weavers, (piece)	2	50	to	5 00	15	00	to	30 00
Wool Sorters	3	00	to	3 50	18	00	to	20 00

WAGES OF FEMALE LABOR IN PHILADELPHIA, 1870, 1871.

	PER DAY.		PER WEEK.	
Accountants	$1 75 to $2 75		$10 00 to	$16 50
Album Fitters	1 50 to 2 00		9 00 to	12 00
Artists Colorers	1 75 to 2 50		10 50 to	15 00
Artificial Flower Makers	1 00 to 3 00		6 00 to	18 00
Artificial Teeth Makers	1 50 to 2 00		9 00 to	12 00
Bakers, cakes, etc	1 50 to 2 00		9 00 to	12 00
Bedding and Upholstering	2 00 to 2 50		12 00 to	15 00
Blacking Packers	1 00 to 1 50		6 00 to	9 00
Blank Book Makers	1 25 to 1 50		7 50 to	9 00
Book Binders	1 25 to 1 50		7 50 to	9 00
Bonnet Frame Makers	1 00 to 1 75		6 00 to	10 50
Bonnet Finishers	2 00 to 2 50		12 00 to	15 00
Boots and Shoes, ladies and children	1 00 to 2 50		6 00 to	15 00
Boxes, of Paper	50 to 2 00		3 00 to	12 00
Braid Weavers	1 00 to 2 00		6 00 to	12 00
Brush Makers	1 00 to 2 00		6 00 to	12 00
Button Makers	75 to 2 00		4 50 to	12 00
Canned Fruits	75 to 2 00		4 50 to	12 00
Cap Makers	75 to 1 75		5 00 to	10 00
Card Packers	1 00 to 1 75		6 00 to	10 00
Carpet Spoolers and Winders	1 50 to 2 50		9 00 to	15 00
Chemical Works	1 00 to 2 00		6 00 to	12 00
Clothing Makers (piece work chiefly)	1 00 to 1 50		6 00 to	9 00
Collars and Shirts	1 00 to 2 00		6 00 to	12 00
Confectioners (packing)	60 to 2 00		3 50 to	12 00
Corset and Shirt Makers	1 00 to 2 00		6 00 to	12 00
Cotton Goods Weaver's	1 50 to 2 30		9 00 to	14 00
" " Spoolers, etc	75 to 2 00		4 50 to	12 00
" " Print Works	1 00 to 2 50		6 00 to	15 00
Drugs and Medicines, Packers	1 00 to 2 00		6 00 to	12 00
Engravers and Printers	1 00 to 2 00		6 00 to	12 00
Envelope Makers	75 to 1 50		4 50 to	9 00
Furriers	1 00 to 2 50		6 00 to	15 00
Gold Leaf Packers	1 00 to 2 00		6 00 to	12 00
Gold and Silver Coinage	1 50 to 2 00		9 00 to	12 00
Hair Cloth Weavers	1 50 to 2 00		9 00 to	12 00
Hair Workers (human)	1 00 to 2 00		6 00 to	12 00
Hosiery, Cotton	50 to 2 00		3 00 to	12 00
Hosiery, Woolen	75 to 2 50		4 50 to	15 00
Map Colorers	75 to 2 00		4 00 to	12 00
Milliners and Straw Goods	1 00 to 2 50		6 00 to	15 00
Morocco Leather	1 25 to 1 50		7 00 to	9 00
Neckties	1 00 to 1 75		6 00 to	10 00
Paper Mills	1 00 to 1 75		6 00 to	10 00
Paper boxes and bags	50 to 2 00		3 00 to	12 00
Perfumes and Cosmetics	1 00 to 2 00		6 00 to	12 00
Printers—Job and other	1 00 to 2 00		6 00 to	12 00
Seed Packers	50 to 1 75		3 00 to	10 00
Segar Makers (by piece)	1 00 to 1 75		6 00 to	10 00
Shawl Weavers and Makers	1 25 to 2 25		7 00 to	14 00
Shirt Makers	1 00 to 2 00		6 00 to	12 00
Shoe Fitters	1 25 to 2 00		7 00 to	12 00
Silk Ribbons, Fringes, etc	75 to 2 50		4 50 to	15 00
Silk and Worsted Dress Goods	1 00 to 2 50		6 00 to	15 00

	PER DAY.			PER WEEK.		
Silver and Plated Ware	1 00	to	2 00	6 00	to	12 00
Soap Packers	75	to	1 50	4 50	to	9 00
Umbrellas and Parasols	75	to	2 25	4 50	to	14 00
Upholsterers' Goods	1 00	to	2 00	6 00	to	12 00
Webbing and Tape	1 00	to	2 25	6 00	to	14 00
Window and Lamp Shades	1 25	to	2 00	7 00	to	12 00
Woolen Manufacturers	1 00	to	2 50	6 00	to	15 00
Worsted Manufacturers	1 25	to	2 50	7 00	to	15 00

DISCUSSION.

J. G. Rosengarten, Secretary of the Association, in introducing the lecturer of the evening, said:

Ladies and Gentlemen: The paper for this evening will be the concluding one for this season; it is to be read by Mr. Blodget, the statistician of Philadelphia, the man who has devoted more time, zeal and labor to the examination and reformation of our statistics, and in the production of proper results adducible from them, than any one else; he has worked with particular reference to the national census; a part of his labors will be included in his remarks to-night.

There is one particular matter for which we invited Mr. Blodget's help, and which I took the liberty of announcing in advance of his paper—that is, the programme of statistical observation and reports with a view to the census as suggested by labors of a similar kind in Europe. There was in France, at the time of the great Exposition, under the charge of Le Play, a series of observations upon wages and labor, and it was thought right that an effort should be made here, with the view of reaching something like certainty; for the statistics of labor and wages in the census are almost entirely deficient.

I hope in time Mr. Blodget will find leisure to enforce upon both the National, State and local governments the necessity of continuous attention to the statistics of labor.

The paper of Mr. Blodget will be printed in full, as have been the other papers of the Association, in the forthcoming numbers of the Penn Monthly.

We invite, at the close of the paper, discussion on the several points suggested by those who are present.

This Association is now about to take its annual summer rest, but I look forward to the labor of next winter with a great deal of interest. This kind of labor cannot be considered as mere abstraction certainly, but as matter of public importance, though not

affecting immediately or directly the private interest of individuals. To keep up such an organization requires the labor of many persons, and there are incidental expenses attached to it, which require contributions, in money if not in kind, from the members. We have so far gone forward in our work with a comparatively small number of members; and upon them has rested a good deal of the labor and burden. In order to expedite that business more successfully, and bring it to perfection, it is very desirable that the number of members should be very largely increased. If during the summer months we succeed in doing this, it is our hope to make this or some other suitable hall a place of permanent meeting. The Board of Trade has taken this hall, and will fit it up to suit their purposes, and we hope to be able to secure part of the hall for our own use permanently, and thus have a place for the meeting of our committees, and for the informal discussion of such matters as may be brought up in the Association. Apart from the public teachings there has already been a good deal done by the Association to bring the subjects discussed at its meetings to the notice of prominent men; if we have a sufficient number of members and sufficient support from the public who are not members, we shall be able to lead public opinion more than has hitherto been done in the matter of preliminary inquiries in the field of legislation. The other branches of the Association have had a great deal of success elsewhere. We would like to have such further addition to our membership as will enable us to carry out the plan of the Philadelphia Social Science Association. I will invite your attention now to Mr. Lorin Blodget's paper.

At the conclusion of the paper, Mr. Blodget said:

I have been very deeply interested in many of the results of this census, and have here given you the leading points as they have presented themselves to me; but I am aware that others may be interested in other features of the case, and that there are important points I have not touched upon. If so, I would be glad to respond to any inquiries, and to hear any suggestions that may occur to you. I will here say that the general tabular statement, showing the numbers employed in each industry, and the production of each class of articles manufactured, has been received with great interest by people of other States, as well as by our own citizens.

It will be issued in separate form, complete for every distinguishable manufacture, and constituting an extended tabular statement covering many pages; the several classes of results being alphabetically arranged. I shall append to this paper a statement of the wages paid daily and weekly in the leading industries, giving those to females separately. I have been astonished to find so great a number of industries giving employment to females. Every part of the tabular statement shows a very unusual development of that class of persons employed.

Mr. Thomas H. Speakman said: Mr. Chairman; I have been much interested in what has been said as to the industries of the city, and much gratified with the attention and research which have been applied to the subject. It is interesting and instructive, and if I had any criticism to make upon it, it would be something like this—that the discourse we have heard has a defect found in almost all works of political economy. It comes too near to assuming that the chief object, or almost the only object of a community is to be rich, and so to be prosperous. And this in the sense that the chief virtue is industry; industry in accumulating dollars. I think this view overdone, generally speaking, and I was therefore interested most in what was said in reference to the tendency of the employers and employed to approach a level—the growing and improving condition of the laboring class. What was said on that point interested me, as I believe it does not generally receive the attention it should. Too much is thought of mere accumulation of wealth, and not enough of the question whether the community lives wisely and sensibly.

Now I believe that a man was not made to live all his days a mere beast of burden, and the community in which a man must labor ten hours every day of his life, almost in order to live, evinces that there is something wrong. Not only does the laborer have to work in this way all his life, but many employers work a great deal more than that. They are more slaves, so to speak, than the persons employed; because these can finish their labor in ten hours, while the employer, even if a great capitalist, perhaps works sixteen hours or more. Viewed rightly, he is the slave. Some proprietors retire at a reasonable time and give way to others; but for the most part they continue to work merely to accumulate wealth. I think this an error, and that a wrong sen-

timent prevails on that subject. More time should be given to intellectual and moral culture. Socially, man ought not to be looked upon as a mere machine, a mere drudge. We should not live merely to accumulate; and the attention of the community ought to be directed to this point by persons who are competent to do it, as the gentleman who has read the paper to-night.

Indeed I think the attention of the Government might be turned to this subject. Where there is much wealth in the few there is little in the many. There is too much labor employed and money expended in articles of mere luxury. I should like to hear others on this point, and will only venture one or two suggestions as to a remedy. Instead of recognizing merit in the accumulation of wealth alone, and in mere worldly prosperity, there should be more moral and intellectual culture required in the community. Measures should be taken to promote equality between employers and employed, and to bring about a state in which all may live easier, and without spending so much time and labor in controversies.

Another thought is that suggested by Wendell Phillips, that there should be legislation tending, as he expressed it, to "make it expensive to be rich." I believe the rate of taxation should be increased in proportion, so that a man with a house worth only a thousand dollars would be almost exempt. Let the taxes be paid chiefly by the wealthy. This would bring about a state of society in which there would be some merit accorded to intellect and moral culture more than now; a state in which the great question would be whether the community lives sensibly and wisely, rather than whether it accumulates a great many dollars in each year.

Mr. John D. Watson said: There is no means by which so great a change can be brought about as to bring employer and employed on the same social level. I should be glad to find it, if there is, and would do anything reasonable to aid it. This subject has attracted the attention of thinkers and speakers all over the civilized world, and it relates to many other pursuits than that of manufacturing; to everything which belongs to advanced civilization. There is no mode of escape from taxation. Taxes may be put on the capitalist as heavy as you please, and he will simply transfer them to his customer. What is his capital? It is in the form of machinery, of goods, or banking houses, or

any other source of profit. Tax these and he puts the tax on his products or his customers, and the poor man not only pays it, but pays more than the government originally charges.

The reason why we all labor is because it is the common lot of man; none but mere idlers fail to labor in some way, and the man who owns a factory labors harder than any of his men. It is misrepresentation to hold these proprietors up as people who grind the poor to the dust. They give employment when it otherwise would not be given; their capital is at work in the money without which the factory could not be run, and they are the very basis upon which the whole industry rests.

It is stated that the wages of such labor in this city amount to $62,000,000. Where does this go? It goes into consumption; perhaps into bank, and again returns to trade and industry. The whole sum of $62,000,000 aids business directly as it is paid out. Even the $5,000,000 on deposit in our savings banks is loaned out to aid business. In my judgment it is no evil to accumulate wealth, for wealth is the basis of civilization. The principle of competition is at the foundation of modern society. We compete in everything because we want the benefits of this wise and wholesome principle.

I was struck by the remark that the steam-power employed in our manufacturing industry was 50,000 horse-power. One horse-power equals the labor-power of ten able-bodied men, so that we have, in this city alone, machinery equal to the hand-labor of 500,000 men. While employing but 140,000 persons in fact, its work accomplished is that of 500,000 more men. This is wealth —embodied wealth in its most advanced form; and in these statistics, as I saw them in the speaker's office before coming here, I found the reason why we number more than 800,000 people in Philadelphia. Human labor is economized; the ingenuity of men has devised labor-saving machinery by which vast economies are effected, and none need labor sixteen hours a day, leaving him no time to educate his mind. In my own business the Bullock press does everything by power, saving the labor of sixteen men in a single press-room. So it is in all forms of mechanical industry. It is not so many men thrown out of employment; it is simply transferring them to the mines to be worked; the cities to be built; the millions of acres to be tilled; the lines of commercial

traffic to be conducted. In a country of 3,000,000 square miles, and with capacity for 300,000,000 people, we simply require more inhabitants than can possibly be added in our own life-time.

Another point worth attention, is the minor industries of the city, these are of great interest; Leplay, in his work on the Organization of the Industry of France, gives in detail the statistics of industry in Paris, and I have been forcibly impressed by his statement, that the ingenious and elegant fabrics that distinguish that city, chiefly come from shops in which but two or three persons are employed. In our own city there are many places of this kind; and our skill is but little inferior to theirs.

I trust we shall never have to regret the mere piling up of wealth at the sacrifice of culture. For what is culture? Is it the improvement of the mind by reading alone, or by college and school education? On the contrary, a large part of the culture we get is unconscious. It is got by everything that educates our tastes, even in the streets. It is got by contact with society; it must be gathered up wherever we may find it. An artist from France found his skill failing him after arriving in New York, because what he saw so often offended his taste, instead of supplying it with models.

Mr. Shoemaker said: That he trusted to see a time come when it would be as profitable to be a workman as to be a capitalist; not profitable in the money sense alone, but in the comforts and advantages that make life happy. He deprecated the fierce competition in business now going on, and regretted the intimation of the speaker that the business of many proprietors was conducted in a manner not proper to explain. He believed a better state of society possible in the future.

Mr. Blodget explained that no intimation had been intended that proprietors had anything wrong in their management to be concealed; he had only referred to their right to keep their own business from exposure. No officer could have a right to communicate facts relating to individual establishments.

Mr. Shoemaker, resuming, said that an important point of inquiry would be to learn what share of the wages paid to labor was expended in vices and fictitious wants; if one-fifth was so expended, it was clear that eight hours instead of ten would

suffice for a day's labor, or one-fifth of a man's years might be devoted to rest in his old age.

An inquiry being made as to the cost of labor generally in manufactures, Mr. Blodget stated that it ranged from 20 to 30 per cent. of the value of the finished products; work by hand costing more for labor, and by steam machinery the least. Also, as to the expenditures of the laboring classes, it is only just to say that very little goes to vice or waste. In foreign countries a much larger proportion goes to vicious indulgence than here, although the wages are much less. Our people in industrial employment will challenge comparison with any in the world for economy and the proper use of the wages they receive. They do not spend a hundreth part of their wages in vice; and as to tasteful clothing and care in personal appearance, although a good deal is spent that way it is no injury to them, in most cases. It improves their position in every way, and promotes self-respect as well as helps them to remunerative employment. Many of the present proprietors have advanced themselves from the grade of laborers, and there is no pauperized masses of either sex, falling into distress at frequent intervals.

In answer to an inquiry whether the building interest had been included in the account, Mr. Blodget stated that a large share had been; an amount believed to be about half the actual value of the buildings erected in 1870, yet amounting to $17,881,413 in value.

Mr. Rosengarten moved the usual resolution of thanks to Mr. Blodget, with a request of a copy of the paper, and a brief of the discussion for publication.

Adjourned.

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Blodget, Lorin
The census of industrial employment, wages, and social condition, in Philadelphia, in 1870

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